

Claims

- 1) Method for increasing yield of a plant compared to corresponding wild type plants, comprising modulating expression in a plant of an isolated nucleic acid sequence encoding a TAD protein, or a homologue, derivative or active fragment thereof and/or modulating activity of a TAD, a homologue, derivative or active fragment thereof.
- 2) Method according to claim 1, wherein said modulation is effected by recombinant means and/or chemical means.
- 3) Method according to claim 1 or 2, wherein said modulating expression comprises introducing into a plant a nucleic acid sequence encoding a TAD protein or a homologue, derivative or active fragment thereof.
- 4) Method according to any of claims 1 to 3, wherein said increased yield comprises increased seed yield.
- 5) Method of claim 4, wherein said increased seed yield comprises at least an increase in the number of filled seeds.
- 6) Method of claim 4, wherein said increased seed yield comprises at least an increase in total seed weight.
- 7) Method of claim 4, wherein said increased seed yield comprises at least an increase in Harvest Index.
- 8) Method of any of claims 1 to 7, wherein said nucleic acid sequence encoding a TAD protein is derived from a plant.
- 9) Method according to any of claims 1 to 8, wherein said modulated expression is overexpression compared to corresponding wild type plants.
- 10) Construct comprising:
 - a. a nucleic acid sequence capable of modulating expression of a nucleic acid encoding a TAD protein and/or activity of a TAD protein;
 - b. one or more control sequences capable of driving expression of the nucleic acid sequence of (a)

c. a transcription termination sequence.

11) Construct according to claim 10, wherein said nucleic acid encodes a TAD protein.

12) Method for the production of a transgenic plant having increased yield compared to corresponding wild type plants, which method comprises:

- a. introducing into a plant or plant cell a nucleic acid sequence or a portion thereof encoding a TAD protein or a homologue, derivative or active fragment thereof;
- b. cultivating the plant cell under conditions promoting regeneration and mature plant growth.

13) Transgenic plant having increased yield compared to corresponding wild type plants, characterised in that said transgenic plant has modulated expression of a nucleic acid sequence encoding a TAD protein and/or modulated activity of a TAD protein.

14) Transgenic plant of claim 13, wherein said modulated expression and/or modulated activity is increased expression and/or increased activity, compared to corresponding wild type plants.

15) Transgenic plant according to claim 13 or 14, wherein said plant is a crop plant such as soybean, sunflower, canola, alfalfa, rapeseed or cotton, preferably a monocotyledonous plant such as sugarcane, most preferably a cereal, such as rice, maize, wheat, millet, barley, sorghum.

16) Transgenic plant cells, transgenic plant parts, including harvestable parts, propagules, seeds or progeny, of a plant according to any of claims 13 to 15.

17) Use of a nucleic acid sequence encoding a TAD protein and/or of a TAD protein for increasing yield.

18) Use of claim 17, wherein said increased yield comprises increased seed yield.

19) Use of claim 18, wherein said increased seed yield comprises at least one of increased number of filled seeds, increased total weight of seeds or increased Harvest Index.

20) Use of a transgenic plant according to any of claims 13 to 15, plant parts or seeds thereof for processing.